

**CLAIMS**

1. Method for marking data packets (DP) of a data transmission flow (TCPF) pertaining to an end-to-end connection within a packet network, said method including the steps of

- 5           - for each subsequent one of said data packets (DP), generating a priority (P) based on at least one service quality parameter (BW,BT) attributed to said data transmission flow,  
          - inserting said priority (P) within said each subsequent one of said data packets for further transmission to said packet data network

10       characterised in that

said priority (P) is further generated based upon a network feedback parameter (NFB) indicative of the state of congestion within said packet network.

15       2. Method according to claim 1

characterised in that

said network feedback parameter (NFB) is related to the state of congestion on said end-to-end connection.

20       3. Method according to claim 1

characterised in that

said network feedback parameter (NFB) is related to the state of congestion within a routing device of said network.

25       4. Method according to claim 1

characterised in that

said priority (P) is further generated from at least one other parameter ( $\beta, \gamma$ ) attributed to said end-to-end connection.

30       5. Method according to claim 4

characterised in that  
said priority (P) has one of a predetermined set of priority values  
(HI,LO).

5                   6. Method according to claim 5  
characterised in that  
said at least one other parameter attributed to said end-to-end  
connection is a reduction factor ( $\gamma$ ) whereby the rate of generating a first type  
of priority having a first predetermined value (HI) of said set is decreased  
10 based on said reduction factor ( $\gamma$ ).

7. Method according to claim 6  
characterised in that  
said at least one other parameter attributed to said end-to-end  
15 connection is an increase factor ( $\beta$ ), whereby the rate of generating said first  
type of priority is increased based on said increase factor ( $\beta$ ).

8. Method according to claim 1  
characterized in that  
20 said at least one service quality parameter consists of an agreed  
bandwidth value (BW) and an agreed burst tolerance value (BT) .

9. Marker device (MD) adapted to generate a priority (P) and to  
insert said priority (P) within a data packet (DP) of a data transmission flow  
25 (TCPF) pertaining to an end-to-end connection within a packet network, said  
marker device (MD) being adapted to generate said priority (P) based on at  
least one service quality parameter (BW,BT) attributed to said data  
transmission flow (TCPF)  
characterized in that

said marker device (MD) is further adapted to generate said priority (P) from a network feedback parameter (NFB) indicative of the state of congestion within said packet network.

5                   10. Marker device (MD) according to claim 9  
characterised in that  
said network feedback parameter (NFB) is related to the state of congestion on said end-to-end connection.

10                   11. Marker device (MD) according to claim 9  
characterised in that  
said network feedback parameter (NFB) is related to the state of congestion within a routing device of said network.

15                   12. Marker device (MD) according to claim 9  
characterised in that  
said marker device (MD) is further adapted to generate said priority (P) from at least one other parameter ( $\beta, \gamma$ ) attributed to said end-to-end connection.

20                   13. Marker device (MD) according to claim 12  
characterised in that  
said marker device (MD) is further adapted to generate said priority (P) so as to have one of a predetermined set of priority values (HI, LO).

25                   14. Marker device (MD) according to claim 13  
characterised in that  
said at least one other parameter attributed to said end-to-end connection is a reduction factor ( $\gamma$ ) whereby said marker device (MD) is further

adapted to decrease the rate of generating a first type of priority having a first predetermined value (HI) of said set, based on said reduction factor ( $\gamma$ ) .

5                   15. Marker device (MD) according to claim 13  
characterised in that  
said at least one other parameter attributed to said end-to-end connection is an increase factor ( $\beta$ ), whereby said marker device (MD) is further adapted to increase the rate of generating said first type of priority, based on said increase factor ( $\beta$ ).

10                   16. Marker device according to claim 9  
characterized in that  
said at least one service quality parameter consists of an agreed bandwidth value (BW) and an agreed burst tolerance value (BT).

15                   17. Terminal coupled to a packet network and adapted to transmit data packets of a data transmission flow (TCPF) pertaining to an end-to-end connection within said packet network to at least one other terminal coupled to said packet network, said terminal including a marker device (MD) adapted to  
20 generate a priority (P) and to insert said priority within a data packet (DP) of said data transmission flow (TCPF), said priority (P) being generated based on at least one service quality parameter (BW,BT) of said end-to-end connection in said packet network

characterised in that  
25                   said marker device (MD) is further adapted in accordance to any of the claims 9 to 16.

18. Access router apparatus of a packet network, said access router apparatus being adapted to receive data packets from a terminal coupled to  
30 said access router, said data packets pertaining to an end-to-end connection

within said packet network between said terminal and another terminal coupled to said packet network, said access router apparatus including a marker device (MD) adapted to generate a priority (P) and to insert said priority within a data packet (DP) of a data transmission flow (TCPF) pertaining to said end-to-end connection, said priority (P) being generated based on at least one service quality parameter (BW,BT) of said end-to-end connection in said packet network

characterised in that

said marker device (MD) is further adapted in accordance to any of the claims 9 to 16.